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An Integrated Model of Chinese Older Adults' Acceptance of Social Networking Technology

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Keywords: Older adults, China, social networking technology

Introduction

With the ageing of the population and the rapid growth of mobile technology the needs and preferences of older adults as users of mobile Internet have garnered increasing interest worldwide. However, academic research attention to older adults' perceptions of internet-based communication technology has been very limited so far (Kuoppamäki, 2017). This study aims to fill the literature gap by examining Chinese older adults' perceptions of social networking technology. There are three reasons that motivate us to conduct this study. *First*, China is ageing more rapidly than almost any country (United Nations, 2017). In 2016, the population count in the age group of 55 and above is about 291.4 million people (21.2% of China's total population) and is about 89.9% of the entire U.S. population (U.S. Census Bureau, 2017). *Second*, China has shown rapid development in mobile Internet. At the end of 2016 China's Internet users reached 731 million, a figure equivalent to the population of Europe. The number of mobile Internet users takes up 95.1% of the total, reaching 695 million with an annual growth rate exceeding 10% for the past three consecutive years (China Internet Network Information Center, 2017). *Third*, Internet-based technology is continuing to penetrate ageing population. Up to December 2016, of 731 million Chinese Internet users, 13.7% aged 40-49 and 9.4% aged 50 and above; compared with 12.4% and 6.2% respectively in 2012 (China Internet Network Information Center, 2017, 2013). More and more Chinese older adults use social networking apps on their mobile phones. Older adults are becoming an important market segment for all internet-based services, but the acceptance and use of social networking technology by Chinese older adults is unexplored in literature. As such, understanding their perspectives offers valuable insights.

Theoretical Framework

The unified theory of acceptance and use of technology (UTAUT) model (Venkatesh et al., 2003) and the perspectives of hedonic motivation, perceived value, and consumer satisfaction serve as the study's theoretical framework. The UTAUT model is based on the theory of planned behavior (TPB) (Ajzen, 1991), which states that behavioral intention is determined by attitude, norm and the perception of control over the behavior. The UTAUT model illustrates the four attitudinal dimensions (performance expectancy, effort expectancy, social influence and facilitating conditions) as the determinants of behavioral intention which lead to actual use of the technology. Later, Venkatesh et al. (2012) modified the model and integrated additional dimensions, such as hedonic motivation. Based on the UTAUT model and the specific research objectives of this study, an integrated model was developed including five exogenous constructs, three endogenous constructs, and 13 hypotheses (Figure 1).

Research Method

Empirical survey-based research method was used to investigate the relationships in the model. A total of 25 items were adopted from the literature to measure the eight constructs (Venkatesh et al., 2012; Kim, Kim, & Wachter, 2013) using a five-point Likert-type scale. Social networking platform WeChat was chosen as the study focus as it is one of the world's largest social networking apps and is the most popular social media app in China. Translation and back-translation of the questionnaire were performed by two Chinese scholars who are fluent in both English and Chinese. The online survey was developed using Qualtrics software. After IRB was approved, survey invitations with online survey link were distributed through WeChat. The target respondents are people over the age of 50. A snow ball sampling method employing personal contacts was used to increase the sample size. A total of 331 responses were collected and 323 responses are valid for data analysis. The participants were from the ages of 50-54 (24%), 55-64 (32%), 65-74 (26%), 75-84 (17%), and 85 and over (1%); and 70% respondents were women. About 32.2% of the respondents were living with their children together.

Results, Discussion, and Conclusions

The two-step approach in structural equation modeling (SEM) was used to test the structural relationships in the model. Twenty-four items were retained as measures of the eight constructs in the study, with all the constructs meeting both reliability and validity requirements. All the model fit statistics, indicating the overall acceptability of the structural model analyzed, were acceptable: $\chi^2/df = 1.98$, GFI = .90, CFI = .97, and RMSEA = .05. The results support about half of the relationships in the proposed model (see Table 1). Specifically, performance expectancy, facilitating condition, social influence, and hedonic motivation were all found to have a significant positive influence on consumer perceived value. In addition, the results confirmed the positive impact of facilitating condition on satisfaction. Both perceived value and satisfaction were also found to have a significant positive effect on consumers' intention to use social networking technology. Surprisingly, hedonic motivation's impact on this group of consumers' satisfaction with the use of social networking technology was negative. This implies that even though Chinese older adults generally enjoy using social networking technology, they know that they probably spend too much time on it.

This study developed an integrative view to investigate factors affecting the acceptance and use of social networking technology by active older Internet users in China. Future research may be needed to make more in-depth investigation of the non-significant results from this study and further to explore older adults' perceptions and behaviors toward mobile-commerce.

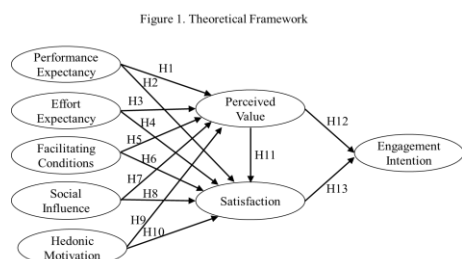


Table 1. Structural Model Estimates

Hypotheses	From	To	Standardized Coefficient	T-value	P-value	Results
H1	Performance Expectancy	Perceived Value	0.18	3.28	≤ .001	Support
H2	Performance Expectancy	Satisfaction	-0.03	-0.43	> .05	Not support
H3	Effort Expectancy	Perceived Value	-0.11	-1.62	> .05	Not support
H4	Effort Expectancy	Satisfaction	-0.13	-1.38	> .05	Not support
H5	Facilitating Conditions	Perceived Value	0.18	2.15	≤ .05	Support
H6	Facilitating Conditions	Satisfaction	0.34	2.83	≤ .05	Support
H7	Social Influence	Perceived Value	0.16	2.67	≤ .05	Support
H8	Social Influence	Satisfaction	0.02	0.29	> .05	Not support
H9	Hedonic Motivation	Perceived Value	0.59	9.14	≤ .001	Support
H10	Hedonic Motivation	Satisfaction	-0.25	-2.10	≤ .05	Not support
H11	Perceived Value	Satisfaction	0.82	5.35	≤ .001	Support
H12	Perceived Value	Engagement Intention	0.74	11.31	≤ .001	Support
H13	Satisfaction	Engagement Intention	0.14	2.25	≤ .05	Support

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